

OHIO AGRICULTURAL EXPERIMENT STATION
Vegetable Crops Substation, Marietta, Ohio

Department of Horticulture Mimeograph Series No. 203
February 1, 1960

STAKED TOMATO VARIETY TRIALS - 1959
Marietta, Ohio

Walter N. Brown*

The 1958 staked-tomato variety trials at Marietta included twelve varieties in six replications and twenty varieties replicated two times. Of the twelve varieties in the six replicated trial Hotset and Indian River are new. Several new varieties are included in the two-replicated trials. The results are presented in Tables 1 and 2.

CULTURAL INFORMATION

Seed was sown March 13 in sash houses and plants set in field on May ⁶~~14~~, 1958. A barley cover crop was plowed down with 300 lbs/A. of ammonium nitrate, and 550 lbs/A. of a 3-9-18 fertilizer was drilled and disced in before planting. A sidedressing of 100 lbs/A of ammonium nitrate was applied after the first cluster was set. Rows were spaced 48" apart with plants spaced 18" in the row; 15 plants per single row plot of 22.5' randomized and replicated either 2 or 6 times. Plants pruned to two stems by allowing first lateral below first cluster to develop and removing all other laterals to the fifth cluster. First harvest made on July 6 and last on August 19. Fruits were harvested in the pre-pink, star-stage.

Grades: Established to evaluate the amount and extent of fruit cracking.
Grade No. 1 - Crack-free fruits meeting all specifications of U.S. No. 1; Grade No. 2 - Cracks less than $\frac{1}{2}$ " in length, well healed and otherwise meeting specifications for U. S. No. 1; Grade No. 3 - Cracks longer than $\frac{1}{2}$ ", well healed and otherwise meeting specifications for U.S. No. 2 or better; Culls - all other fruits not meeting specifications of above three grades.

SOURCE OF SEED

Code	Source
A ₂	Asgrow Seed Co., Inc., 272 George St., New Haven 2, Conn.
A ₄	Alpha Seed Co., Box 1042, Lompoc, Calif.
B ₁	W. Atlee Burpee & Co., Huntington Park @ 18th St., Philadelphia 32, Pa.
C ₁	Corneli Seed Co., 101 Chauteau Ave., St. Louis 2, Mo.
C ₂	Campbell Soup Co., G. B. Reynard, Dept. of Agr.Res., Riverton, N.J.
F ₁	Ferry-Morse Seed Co., P.O. Box 778 Detroit 31, Mich.
F ₂	Florida Agr. Exp. Sta., J. M. Walters, Gulf Coast Sta., Bradenton, Fla.
G ₁	Gill Bros. Seed Co., Montavilla Sta., Portland 16, Ore.
H ₁	Joseph Harris Co., Moreton Farms, Rochester 11, N.Y.
L ₂	Livingston Seed Co., Columbus, Ohio
O ₁	Ohio Agr. Exp. Sta., W.N. Brown, Dept. of Hort., 1827 Neil Ave., Cols.10,O.
O ₂	Ohio Agr. Exp. Sta., L.J. Alexander, Dept. Bot.& Pl. Path., Wooster, Ohio
P ₁	Peto Seed Co., P.O. Box 138, Saticoy, Calif.
P ₃	Penn Agr. Exp. Sta., Dr. Pollock, Dept. of Hort., University Park, Pa.
S ₁	Stokes Seeds Ltd., St. Catherines, Ontario, Canada
S ₂	Francis C. Stokes Seed Co., Vincentown, N.J.
T ₁	Texas Agr. Exp. Sta., P.A. Young, Tomato Disease Lab., Jacksonville, Texas

GENERAL COMMENTS

Growing conditions were unfavorable after first and second cluster set because of high temperatures. Considerable gray wall and blossom-end rot prevailed during the peak of the harvest season contributing to the high percentage of cull fruits.

Footnotes for tables:

- Varieties are ranked in order of early yield of No. 1 grade fruits.
- Figures in () columns 3,4, and 5 are percentages of total early marketable yields harvested in each grade.
- Percentages of total season's marketable yield harvested to July 26 (Early yield).
- Percentages of total season's marketable yield harvested in each grade.
- Percentages of culls based on gross early yield.
- Percentage of culls based on gross season's yield.
- Average fruit size: marketable weight of fruits divided by number of marketable fruits.

*Dept. Horticulture, Ohio Agr. Exp. Sta., 1827 Neil Ave., Columbus 10, Ohio.

TABLE 1
STAKED TOMATO VARIETY TRIALS - 1959
OAES, MARIETTA, OHIO

6 replications

Variety ^a and Lot Number			Source	Early Yield to July 26				Season's Yield to August 19							
				Pounds of Marketable Fruit per A.				Culls	Average	Pounds of Marketable Fruit per A.				Culls	Average
				No. 1	No. 2	No. 3	Total	(lbs.)	Fruit Size8	No. 1	No. 2	No. 3	Total	(lbs.)	Fruit Size8
2	Marietta No. 6	1958 crop	O ₂	16,481 (89.6) ^b	1,815 (9.9) ^b	89 (1.1) ^b	18,385 (31.2) ^c	4,735 (20.5) ^e	.354	44,490 (75.5) ^d	13,415 (22.8) ^d	1000 (1.7) ^d	58,905	10,326 (14.9) ^f	.339
11	Hotset	59	T ₁	16,392 (79.7)	4,114 (20.0)	56 (0.3)	20,562 (34.5)	4,881 (19.2)	.270	38,996 (65.4)	15,255 (25.6)	5,348 (9.0)	59,599	11,689 (19.6)	.246
4	Queens	1484	H ₁	15,537 (82.3)	3,332 (17.7)	-	18,869 (29.3)	2,501 (11.7)	.367	39,141 (60.8)	20,095 (31.2)	5,131 (8.0)	64,367	6,534 (9.2)	.341
10	Early Hycross Hybrid	57	P ₁	15,222 (71.1)	5,752 (26.8)	443 (2.1)	21,417 (32.9)	4,001 (15.7)	.341	38,722 (59.5)	22,136 (34.0)	4,187 (6.5)	65,045	8,753 (11.9)	.310
1	Glamour	1364	H ₁	14,706 (87.5)	1,960 (11.7)	145 (0.8)	16,811 (32.5)	2,460 (12.8)	.333	34,777 (67.2)	15,343 (29.6)	1,646 (3.2)	51,766	9,527 (15.5)	.346
12	Indian River	59	F ₂	13,899 (94.9)	742 (5.1)	-	14,641 (28.4)	4,155 (22.1)	.364	35,479 (68.8)	14,359 (27.8)	1,726 (3.4)	51,564	15,206 (22.8)	.368
8	Moreton Hybrid	1417	H ₁	13,657 (60.1)	8,720 (38.4)	339 (1.5)	22,716 (34.2)	2,944 (11.5)	.381	26,887 (40.5)	30,597 (46.1)	8,906 (13.4)	66,391	8,656 (11.9)	.379
6	Pritchard	2591	L ₁	13,415 (71.5)	5,050 (26.9)	307 (1.6)	18,772 (31.2)	3,469 (15.6)	.290	29,057 (48.3)	25,145 (41.8)	5,970 (9.9)	60,172	8,535 (12.4)	.314
5	Big Early Hybrid	613	B ₁	10,132 (65.5)	5,316 (34.3)	32 (0.2)	15,480 (26.8)	7,518 (32.7)	.397	21,813 (37.8)	26,639 (46.2)	9,220 (16.0)	57,672	18,336 (24.1)	.412
9	Foremost E-21	85209	F ₁	9,705 (67.9)	4,461 (31.2)	129 (0.9)	14,295 (23.5)	4,171 (22.6)	.420	26,831 (44.2)	28,420 (46.8)	5,453 (9.0)	60,704	10,826 (15.1)	.407
3	Early Prolific Hybrid	--	P ₁	9,648 (59.6)	6,106 (37.7)	428 (2.7)	16,182 (27.2)	7,478 (31.6)	.402	26,637 (54.7)	27,694 (46.5)	5,219 (8.8)	59,550	15,101 (20.2)	.379
7	Marietta No. 4	1957	O ₂	7,228 (74.4)	2,452 (25.2)	40 (0.4)	9,720 (19.6)	4,743 (32.8)	.360	24,306 (48.9)	21,265 (42.8)	4,098 (8.3)	49,669	16,771 (25.2)	.357
LSD @ 5% LEVEL															

TABLE 2
STAKED TOMATO VARIETY TRIALS - 1959
OAES, Marietta, Ohio

(2 replications)

Variety and Lot Number			Source	Early Yield to July 26						Season's Yield to August 19					
				Pounds of Marketable Fruit per Acre				Culls (Lbs.)	Average Fruit Size	Pounds of Marketable Fruit per Acre				Culls (Lbs.)	Average Fruit Size
				No. 1	No. 2	No. 3	Total			No. 1	No. 2	No. 3	Total		
27	X88F ₁	T-59	A ₄	25,337 (67.8) ^b	11,132 (29.8) ^b	895 (2.4) ^b	37,365 (43.6) ^c	1,936 (4.9) ^e	.290	36,881 (43.0) ^d	21,586 (25.2) ^d	27,249 (31.8) ^d	85,716	5,784 (6.3) ^f	.363
20	No. 11 Hybrid	89241	F ₁	24,345 (81.9)	5,397 (18.1)	--	29,742 (46.0)	5,421 (15.4)	.332	44,286 (58.5)	16,843 (26.0)	3,533 (5.5)	64,662	12,003 (15.7)	.304
19	No. 3 Hybrid	89239	F ₁	24,297 (84.2)	3,243 (11.2)	1,331 (4.6)	28,871 (54.4)	3,509 (10.8)	.250	34,945 (65.9)	10,721 (20.2)	7,357 (13.9)	53,023	8,785 (14.2)	.239
18	Pa. Hybrid 103	T-59	P ₃	18,368 (60.9)	8,809 (36.4)	653 (2.7)	27,830 (39.0)	5,808 (16.1)	.343	35,695 (50.0)	28,774 (40.3)	6,921 (9.7)	71,390	9,728 (12.0)	.322
28	X 66 F ₁	T-59	A ₄	15,101 (77.3)	4,090 (20.9)	339 (1.8)	19,529 (44.2)	3,436 (15.0)	.354	23,111 (52.3)	15,899 (36.0)	5,203 (11.7)	44,213	7,357 (14.3)	.373
17	Exp. Hybrid 117	T-59	P ₃	14,714 (53.7)	10,817 (39.5)	1,888 (6.8)	27,419 (45.1)	4,574 (14.3)	.319	30,371 (50.0)	21,586 (35.5)	8,785 (14.5)	60,742	9,390 (13.4)	.280
21	No. 18 Hybrid	89240	F ₁	14,157 (66.6)	6,607 (31.1)	4,847 (2.3)	21,248 (32.7)	4,888 (18.7)	.416	25,652 (39.5)	30,419 (46.9)	8,857 (13.6)	64,928	13,842 (17.6)	.423
32	Valiant	YMB	S ₂	12,778 (63.1)	7,200 (35.8)	218 (1.1)	20,255 (32.8)	3,727 (15.5)	.349	29,040 (47.0)	23,982 (38.8)	8,760 (14.2)	61,782	9,365 (13.2)	.313
29	CPS 1783	T-59	T ₁	11,824 (94.6)	678 (5.4)	--	12,511 (19.8)	2,226 (15.1)	.364	38,914 (61.4)	21,756 (34.4)	2,662 (4.2)	63,331	7,212 (10.2)	.342
13	Urbana	T-59	C ₁	11,640 (72.1)	4,501 (27.9)	--	16,141 (25.4)	4,090 (20.2)	.296	35,622 (56.0)	24,853 (39.1)	3,098 (4.9)	63,573	7,623 (10.7)	.284

TABLE 2 (cont'd)
STAKES TOMATO VARIETY TRIALS - 1959
OAES, MARIETTA, OHIO

(2 replications)

Variety and Lot Number			Source	Early Yield to July 26						Season's Yield to August 19					
				Pounds of Marketable Fruit per A				Culls (Lbs.)	Average Fruit Size \bar{x}	Pounds of Marketable Fruit per A				Culls (Lbs.)	Average Fruit Size \bar{x}
				No. 1	No. 2	No. 3	Total			No. 1	No. 2	No. 3	Total		
15	Early Red Chief	322	S ₁	11,035 (64.0) ^b	5,518 (32.0) ^b	702 (4.0) ^b	17,255 (27.4) ^c	1,428 (7.6) ^e	.296	27,031 (42.9) ^d	28,241 (44.9) ^d	7,671 (12.2) ^d	62,943	6,582 (9.5) ^f	.304
24	OSU 26-5	58-M	O ₁	10,333 (82.3)	2,130 (17.0)	97 (0.7)	12,560 (23.4)	4,792 (27.6)	.371	27,903 (52.1)	24,781 (46.2)	920 (1.7)	53,603	15,343 (22.3)	.401
26	Big Red F ₂	T-59	A ₄	9,559 (69.5)	4,187 (30.5)	--	13,746 (40.5)	4,138 (23.1)	.355	17,230 (50.8)	12,923 (38.1)	3,751 (11.1)	33,904	8,301 (19.7)	.339
30	KC 135	KC 135	C ₂	9,511 (76.8)	2,735 (22.1)	145 (1.1)	12,390 (23.7)	5,760 (31.7)	.427	29,088 (55.7)	19,917 (38.2)	3,194 (6.1)	52,199	12,415 (19.2)	.451
31	KC 146	KC 146	C ₂	8,978 (77.6)	2,493 (21.5)	97 (.9)	11,568 (19.7)	3,461 (23.0)	.376	32,476 (55.3)	24,152 (41.1)	2,081 (3.6)	58,709	11,084 (15.9)	.401
23	Oregon Centennial	9028	G ₁	8,785 (78.2)	2,444 (21.8)	-	11,229 (20.6)	3,098 (21.6)	.346	24,926 (45.7)	23,910 (43.9)	5,687 (10.4)	54,523	9,849 (15.3)	.303
16	Big Boy Hybrid	6123	B ₁	8,010 (62.3)	4,743 (36.9)	97 (0.8)	12,850 (21.4)	2,226 (14.8)	.382	19,239 (32.1)	32,162 (53.6)	8,615 (14.3)	60,016	8,276 (12.1)	.436
14	Early Bird F ₂	M 539	A ₂	5,953 (56.9)	4,501 (43.1)	--	10,454 (16.0)	2,130 (16.9)	.346	25,458 (38.9)	36,179 (55.2)	3,848 (5.9)	65,485	6,873 (9.5)	.351
25	OSU 3-1	37-M	O ₁	5,469 (59.9)	3,533 (38.8)	121 (1.3)	9,123 (18.0)	2,589 (22.1)	.250	21,877 (43.2)	26,596 (52.4)	2,251 (4.4)	50,723	9,801 (16.2)	.319
22	Stokesdale	SPG	S ₂	4,380 (47.8)	4,671 (50.9)	121 (1.3)	9,172 (18.5)	4,380 (32.3)	.351	15,367 (31.0)	27,878 (56.3)	6,31 (12.7)	49,562	13,988 (22.0)	.347